WHAT IS CLAIMED IS:

1. A power switching circuit, comprising:

a power switching transistor, having a source and a drain defining a source/drain path connected on a first side to an input of the power switching circuit and connected on a second side to an output of the power switching circuit, having a gate coupled to a control line of the power switching circuit, and having a body node;

a first body node switching transistor, having a source/drain path connected between the body node and the first side of the source/drain path of the power switching transistor, and having a gate;

a second body node switching transistor, having a source/drain path connected between the body node and the first side of the source/drain path of the power switching transistor, and having a gate;

a comparator, for comparing the voltage at the input of the power switching circuit to the output of the power switching circuit, the output of the comparator coupled to the gate of the second body node switching transistor; and

an inverter, biased between the output of the power switching circuit and circuit ground, having an input coupled to the output of the comparator, and having an output coupled to the gate of the first body node switching transistor, for applying a voltage at the gate of the first body node switching transistor corresponding to the output of the power switching circuit responsive to the voltage at the output of the power switching circuit being higher than the voltage at the input of the power switching circuit.

2. The power switching circuit of claim 1, wherein the inverter comprises:

first and second complementary transistors, having their drains connected in common at the output of the inverter, having their gates connected in common to the output of the comparator, and having their source/drain paths

connected in series between the output of the power switching circuit and circuit ground.

3. The power switching circuit of claim 2, wherein the body node of the power switching transistor is connected to the body nodes of the first and second body node switching transistors, and to the body node of the first complementary transistor.

4. The power switching circuit of claim 1, wherein the body node of the power switching transistor is connected to the body nodes of the first and second body node switching transistors.

5. The power switching circuit of claim 1, further comprising:

a load, connected between the output of the power switching circuit and circuit ground.

6. The power switching circuit of claim 1, further comprising:

pass transistor circuitry, for coupling the control line of the power switching circuit to the gate of the power switching transistor responsive to the output of the comparator.

7. The power switching circuit of claim 6, wherein the pass transistor circuitry comprises:

at least one transistor of a first conductivity type, having a source/drain path connected between the control line of the power switching circuit and the gate of the power switching transistor, and having a gate coupled to the output of the comparator; and

at least one transistor of a second conductivity type, having a source/drain path connected between the control line of the power switching circuit and the gate of the power switching transistor, and having a gate coupled to the output of the inverter.

8. The power switching circuit of claim 6, further comprising:

a gate bias transistor, having a source/drain path connected between the gate of the power switching transistor and the second side of the source/drain path of the power switching transistor, and having a gate coupled to the comparator, for connecting the gate of the power switching transistor to the second side of the source/drain path of the power switching transistor responsive to the voltage at the output of the power switching circuit being higher than the voltage at the input of the power switching circuit.

9. The power switching circuit of claim 8, wherein the gate bias transistor has a body node connected to the body node of the power switching transistor and to the body nodes of the first and second body node switching transistors.

10. The power switching circuit of claim 1, wherein the power switching transistor, and the first and second body node switching transistors are each of a first conductivity type.

11. The power switching circuit of claim 10, wherein the source of the power switching transistor is connected to the input of the power switching circuit, and wherein the drain of the power switching transistor is connected to the output of the power switching circuit.

12. The power switching circuit of claim 11, wherein the inverter comprises:

a first transistor of the first conductivity type, having a gate coupled to the output of the comparator, having a source connected to the source, and having a drain;

a second transistor of a second conductivity type, having a drain connected to the drain of the first transistor at the output of the inverter, having a gate

connected in common with the gate of the first transistor, and having a source connected to circuit ground.

13. The power switching circuit of claim 12, further comprising:

at least one transistor of the first conductivity type, having a source/drain path connected between the control line of the power switching circuit and the gate of the power switching transistor, and having a gate coupled to the output of the comparator; and

at least one transistor of the second conductivity type, having a source/drain path connected between the control line of the power switching circuit and the gate of the power switching transistor, and having a gate coupled to the output of the inverter.

14. The power switching circuit of claim 13, further comprising:

a gate bias transistor of the first conductivity type, having a source connected to the gate of the power switching transistor, having a drain connected to the drain of the power switching transistor, and having a gate coupled to the comparator.

15. The power switching circuit of claim 14, wherein the gate bias transistor has a body node connected to the body node of the power switching transistor and to the body nodes of the first and second body node switching transistors.

16. A method of switching power from an input to an output by way of a power switching transistor, comprising the steps of:

responsive to a voltage at the input being higher than a voltage at the output, biasing a body node of the power switching transistor to a voltage corresponding to the voltage at the input by turning on a first body node switching transistor;

applying a control signal to the gate of the power transistor to couple the input to the output responsive to the control signal;

responsive to the voltage at the output being higher than the voltage at the input, biasing the body node of the power switching transistor to a voltage corresponding to the voltage at the output by turning on a second body node switching transistor; and

also responsive to the voltage at the output being higher than the voltage at the input, turning of the first body node switching transistor by applying, to the gate of the first body node switching transistor, a voltage that corresponds to the voltage at the output.

17. The method of claim 16, further comprising:

responsive to the voltage at the output being higher than the voltage at the input, isolating the gate of the power switching transistor from the control signal.

18. The method of claim 17, further comprising:

responsive to the voltage at the output being higher than the voltage at the input, applying a voltage to the gate of the power switching transistor to turn it off.

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